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AMERICAN NURSERYMAN

Chief Exponent of the American Nursery Trade

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IN THIS ISSUE

Roadside Sales Yard Management

Methods Found Successful in Retailing Nursery Stock

Reports on Season's Trade

Better Sales This Fall; Optimistic about Spring

Variety in the Garden

New and Desirable Materials for Southern Regions

New Large-Size Shrubs

L. C. Chadwick Describes Worthy Deciduous Shrubs

Herbaceous Perennials

C. W. Wood Comments on Less Common Varieties

Culture of Natives

W. A. Toole Describes Handling of Wildings

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AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

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A YEAR'S PROGRESS.

This number completes a year's issues from the time The American Nurseryman came under its present ownership and management. A glance backward over the twelve months reveals the progress made. In spite of depressed business conditions, affecting the nursery industry as well as trade at large, the results should be most pleasing to anyone interested in the publication. The improvement in the editorial contents, through the inclusion of original articles on cultural and sales topics helpful to growers of outdoor ornamental crops, has received prompt recognition in the form of a large increase in paid subscriptions. These have more than doubled the circulation of the magazine in the past few months, and the gain is continuing unabated. This is encouraging evidence that nurserymen want and will support a good trade paper of their own—encouraging to the publisher to produce that kind of a paper.

The increased interest of readers in the publication, the larger circulation and the first signs of betterment in nurserymen's business have brought additional advertisers. In comparison with a year

ago, the number of advertisers is twenty-five per cent larger. Here is a representative group of trade offerings, which will undoubtedly be augmented as the months pass. Of course, the low advertising rates make it a bargain to use this magazine to get the attention of a group of such buying power as nurserymen of the country, controlling large acreages and having a turnover running into high figures each season.

Most heartening of all are the letters which come from new and old readers, telling of the value of the magazine to them. The voluntary contributions of readers, the news sent in by officers of trade associations, the manifest desire to lend help and support exhibited by the trade itself, all these are signs of real progress in the past twelve months and augur still more to come.

LOOKING TOWARD SPRING.

Some statements from prominent nursery firms on another page of this issue support observations as to the supply and probable demand for stock the coming season. While there has been a general and sizable pick-up in nurserymen's business during the past few months, that probably was nothing like what it would have been under weather conditions more favorable for planting. The continued shortage of rainfall, even after the severe drought had been broken, deterred many persons from planting. There should be, in consequence, not only a demand resulting from this postponed business, but also to make up for the ravages of the drought.

To meet such demand next spring, stock apparently will be none too plentiful. Fruit trees have already been in great demand at rising prices this year, and some items are selling for twice the figures they brought a year ago. Roses and many perennials have advanced considerably. While large sizes of evergreens and some deciduous trees and shrubs may be ample in number, the smaller sizes are not plentiful. The latter are more in demand, and spring will unquestionably see a strong call and rising prices.

The Mirror of the Trade

Under these conditions, it would seem that distress sales and cut prices are no longer in order. Nurserymen's quotations should be sufficient to give them a margin above their cost of production. A firm level of quotations would do much to relieve the trade's difficulties.

Another evidence of the better demand anticipated is the larger number of nurserymen's catalogues appearing this autumn. Sensing the demand, progressive members of the trade are going to let customers and prospective buyers know what they have on hand. It is time to do so. No longer should anyone sit back inert for lack of business. The signs point to a better demand and better prices, but these are to be secured by those who go after orders.

MORE PENNSYLVANIA NURSERIES

The licensing of nurseries has again set a new high record in Pennsylvania, according to F. M. Trimble, chief nursery inspector. The final report for the inspection year, which closed September 30, shows 796 nurseries containing 9,071 acres of stock licensed. This number represents an increase of thirty-three nurseries, but a drop of 929 in acreage compared to the previous year.

When the first nursery inspection law was passed in 1901, there were 121 nurseries, containing 2,200 acres, in the state, records indicate.

Inspectors' reports show that nurserymen have been able to maintain complete lines of stock. Prices have not been materially increased over last year's, so that it is felt that a real opportunity exists to buy good stock at reasonable prices. Lack of propagation during the past few years, however, indicates a scarcity of many desirable lines of nursery stock in the near future, Mr. Trimble states.

An unusually large demand for fruit trees, especially peaches, due to the great loss of orchards in New York and northern Pennsylvania as a result of the severe winter, is anticipated during the coming year.

INDEX TO ADVERTISEMENTS IN THIS ISSUE

Albert, Theo.	Rare Nursery Stock	13	Mell-Norr	Marvel Dust Spray	16
American Bulb Co.	Bulbs, Seeds, Etc.	13	Milton Nursery Co.	Trees	14
Bernardin's Nursery	General Nursery Stock	13	National Band & Tag Co.	Plant Labels	15
Bobbink & Atkins	Evergreens	13	National Nurserymen's Credit Bureau, Inc.		14
Burr & Co., C. R.	General Nursery Stock	13	Princeton Nurseries	General Nursery Stock	13
Canterbury Nurseries	Boxwood	14	Scarff's Nurseries	Small Fruit Plants	12
Chase Bag Co.	Saxolin	16	Schmidt, J. C.	Nursery Stock	15
Chase Co., Benjamin	Nursery Labels	11	Storrs & Harrison Co.	General Nursery Stock	11
Evergreen Nursery Co.	Evergreens	13	S. W. Supply Co.	Plant Markers	15
Herbst Bros.	Tree and Shrub Seeds	12	Tennessee Nursery Co.	Peach Seed	15
Hill Nursery Co., D.	Evergreen Specialists	13	Tobacco By-Products &		
Hogansville Nurseries	Peach Pits	12	Chemical Corp.	Insecticides	13
Howard-Hickory Co.	Holly Plants	12	Upton Gardens	Evergreen Seeds	12
Howard Rose Co.	Roses	14	Washington Nurseries	Chinese Elm Seedlings	14
Jackson & Perkins Co.	Novelty Roses	13	Westhauser Nurseries	Strawberry Plants	12
Leonard & Son, A. M.	Nursery Tools	15	Westminster Nursery	General Nursery Stock	15
Linville Nurseries	General Nursery Stock	13	White Chemical Co., Wilbur	Cold Wax	15
Lovett, Lester C.	Privet and Berberis	14	Wilson & Co., C. E.	Lining Out Stock	14

AMERICAN NURSERYMAN

[Registered U. S. Patent Office]

The Chief Exponent of the American Nursery Trade

*The Nurseryman's Forte:
To Make America More Beautiful and Fruitful*

Vol. LX

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No. 10

Roadside Sales Yard Management

**Valuable Pointers on the Operation of a Nursery Sales Yard
Given in Article Describing Experiences of D. Hill Nursery Co.**

For the past six years the D. Hill Nursery Co. has directed special attention to the development of an increased trade at the sales grounds that are part of the extensive establishment at Dundee, Ill. In the twelve planting seasons included during this period, the firm has tested many ideas, keeping those that proved valuable and discarding the others. Considerable success has attended the efforts, so that now this firm, specializing in evergreens and having the prestige of seventy-five years' operation, has a substantial retail trade in addition to its regular wholesale business.

A nursery, it is believed at Hill's, must have more than just a highway location to develop a profitable roadside sales yard. It is also essential that the establishment be fairly near a large center of population from which to draw customers. The ordinary highway transients are not the buyers. It is the town residents, motoring out into the surrounding country, who bring the business. The Hill Nursery Co. finds most of its trade coming from within a radius of fifty miles, although occasionally buyers from seventy-five and 100 miles away come in. As Dundee is only about forty miles from Chicago, home owners there and in suburbs form a large percentage of the firm's customers.

Coöperates with Trade.

While selling at retail to planters in the adjacent territory, Hill's coöperates fully with dealers and landscapers in the same area. All offers made to the public and featured at the sales yard are subject to the same trade discount regularly allowed by the firm.

Service to the customer is the keynote of all practices at the establishment. Everything is done to make his visit to the nursery pleasurable, instructive and satisfactory. He is greeted by an experienced salesman. He views freshly dug stock, conveniently arranged for his inspection. He is provided with ample space to park and load his car. He may enjoy the comforts of an attractive reception building. He sees evergreens in permanent plantings as they should be used.

There is a large area where balled and burlapped specimens of various evergreens in different sizes rest on straw in bins. The varieties offered are selected with care. Only about forty out of the 150 kinds of evergreens grown

at the nursery are regularly handled in the sales yard. These forty represent the varieties that are most useful and most in demand. The others wanted by more experienced planters than those represented by the usual customer can be dug on short notice as needed.

Fresh Stock.

Fresh-dug stock only is sold. Each day there are additions from the fields. At the beginning of each week, a thorough check is made to eliminate from the merchandise displayed everything that has been dug more than seven days; this stock is discarded. Each item has three tags showing conspicuously on it. One is the inspection tag of the nursery, on the reverse side of which are complete planting instructions. A second is the warranty card that guarantees the stock as represented and as being satisfactory upon arrival, but does not guarantee the trees to grow. The third card gives the name of the variety and the price. It is essential, it is felt, to have every item clearly priced, as customers do not seem to like to ask the cost of plants.

So far as possible, the sales staff is drawn from the regular force, as it is believed that a more satisfactory transaction results when the customer deals with a trained individual. Such a person can usually answer most of the customer's questions about planting the stock. He can give helpful points on the culture and, often, on the use of the different varieties.

Salesmen Coached.

The salesmen are coached to build up sales wherever possible. They explain to the customer how he can use several plants to better effect than a single plant. They present the merits of a few side line items while the customer is in a buying mood and concerned about the future welfare of his purchase. Among the accessories that have proven profitable are a wire tree protector, a specially prepared evergreen fertilizer and books on evergreens. The sales of these additional items over a season swell the total sales considerably. In all cases the salesmen must be tactful in giving information, it has been found; they can easily antagonize a customer by a superior attitude.

Because most of the customers wish

to take along the plants they have bought, the ways of most conveniently loading the buyer's car should be worked out. This thoughtfulness will be appreciated when the customer has successfully got his purchases home. In this connection, a highly important point is to be careful in selling not to urge large specimens that it would be difficult, if not impossible, to handle on the ordinary pleasure car. There is no object in selling the customer a huge specimen, no matter how much a bargain it may be, if he cannot transport it on his car. If he does try to carry the item and it causes damage to his car, he will be displeased, and the disappointment he may experience even in finding he is unable to handle something offered is also undesirable.

Deliveries.

The cash-and-carry sale is, of course, the main objective of a sales yard business. There will be, however, many customers who will wish their purchases delivered. When sales are being made over a wide territory, it is almost impossible to handle deliveries direct. It has been found far more practical and economical at Hill's to use the facilities of a regular trucking service, such as can be found in almost any city or town of fair size.

The carrier picks up goods daily and delivers them to the buyer either the same day or the following day. Excellent service is given up to about 100 miles, the pick-ups being taken to a central depot and then transhipped according to routes. The regular charge made varies from 30 to 50 cents per hundred pounds. Salesmen knowing this figure and having a computation of the average weight of almost everything sold can readily determine the delivery cost for the customer. When shipments must be made by freight, boxing costs are added.

The firm does not maintain a landscape department and does not carry out designing or planting contracts. During the height of the planting season, however, it does arrange, usually, to have one or two persons equipped to handle landscape problems and talk to the customers at the sales yard. These individuals work on their own, aiding the buyers as much as they can at the time and proffering their services for more complete development of landscaping

plans and for planting work. The firm also keeps in touch with capable landscape architects in various communities and will give their names to customers on request.

Permanent plantings about the establishment are designed to give landscaping suggestions to customers. For another season it is proposed to have a variety of model plantings to stimulate the interest of buyers. These plantings will be of groups, showing different combinations for dooryard and foundation use. Appropriately painted backdrops may be worked out. Further, a large area near the sales yard will be planted to different types of evergreens, having extra space between the rows to permit visitors to inspect the trees easily.

The reception house, completed this fall, represents another effort to give customers service. It is an attractive one-room structure with wood-paneled walls and a large fireplace opposite the entrance. The furnishings are chiefly of upholstered maple. Stands carry copies of current horticultural publications. An arrangement of evergreen branches over the fireplace is an appropriate decorative touch.

Publicizing Sales Yard.

Important in the operation of any nursery sales yard are the methods used to advertise it. Direct-mail, newspaper and radio announcements are all employed by Hill's. Effort is concentrated on publicizing the week-end sales, Sunday being the busiest day at the nursery. During the planting season, Friday is likely to find a Hill advertisement in several of the Chicago daily newspapers, supported by a special radio broadcast. The firm has carefully checked the returns from each of the available newspapers and apportions the expenditures accordingly. Varying sizes of ads have been tried, and it has been found there is a point where increasing the size of the ad makes no appreciable difference in returns. The minimum size to make the firm's ad have the necessary prominence on a page was found to be about four double column inches.

Radio Advertising.

For two years Hill's has sponsored a radio program at 10 o'clock each Sunday morning over a Chicago station. In deciding to use radio advertising, it was felt consistency would be necessary; so year-around programs were scheduled. The attempt is not made to sell plants so much as it is to link the name "Hill's" with evergreens in the minds of the listeners. The announcements stress the fact that the firm grows evergreens exclusively and has been in the business a long time. The value of transplanting and root-pruning as practiced by the nursery is another topic. Then there is always an urgent invitation to visit the nursery during the planting seasons and profit from the many bargains there.

Folders and letters, each with a special theme, are used when circularizing the mailing list. Mention of the sales yard and special offers, as well as description of the many services that are given at the nursery, appear in considerable detail in the firm's descriptive catalogue sent out to customers and prospects. Other printed materials used in developing sales and

rendering service to customers are "Conifer Comments," a 72-page booklet giving practical information on evergreens, and an attractive plate book showing the wide range of colors and shades offered in evergreens.

AWARD ROSE PRIZES.

At A. R. S. Trustees' Meeting.

The trustees of the American Rose Society met in the office of the secretary, G. A. Stevens, Harrisburg, Pa., October 29.

The tentative arrangement by which the Hartford rose test garden is being operated in cooperation with the society was confirmed, and the method of awarding prizes and the types of prizes to be awarded at Hartford have been referred to a committee to make final arrangements with the park department of Hartford.

The trustees confirmed the prize committee's recommendation to award the Gertrude M. Hubbard gold medal, which is awarded every five years for the best American rose introduced in that time, to L. B. Coddington, Murray Hill, N. J., for Rose President Herbert Hoover. Other awards of this prize were: 1914, to M. H. Walsh for *Excelsa*; 1919, to E. G. Hill for *Columbia*; 1924, to Capt. George C. Thomas, Jr., for Dr. Huey, and 1929, to the Montgomery Co. for *Talisman*.

The David Fuerstenberg prize, to the originator of any new rose suitable to the American climate which may deserve the honor, was awarded to G. A. Stevens, Harrisburg, Pa., for the hybrid rugosa variety, *Vanguard*. This prize was awarded in 1933 to J. H. Nicolas, Newark, N. Y., for *Rose Leonard Baron*.

Because of the increase in the cost of gold medals, the trustees have referred to a committee the work of revising the whole medal situation of the society, with the intention of abandoning the gold medal, except as a mark of great honor and the society's highest award for individual effort in behalf of the rose, substituting in place of it a certificate or metal plaque indicating the awards of merit for varieties.

It was decided to hold two national meetings in 1935, the first to be held in Georgia, as guest of the Georgia Rose Society in late April or early May, and the second to be held in Rochester, N. Y., as guest of the Rochester Rose Society, in the autumn.

Refuse Registration.

A spirited discussion ensued on the work of the registration committee, which has recently refused to register certain rose names, and the practice of American introducers' changing the names of foreign roses was strongly condemned. A motion to cancel the registration of certain of these roses was voted down, but the general attitude of the trustees was that the rules as they now stand must be adhered to.

It was emphasized that the society cannot recognize in its publications names of roses applied in violation of these rules, and that roses exhibited under names which do not conform to these rules are ineligible to the awards of the American Rose Society.

G. A. Stevens, Sec'y.

AMERICAN NURSERYMAN

NATIONAL ROSARIUM STUDIED.

More than twenty rosarians—both amateur and professional—gathered in Washington, D. C., Saturday, October 27, at the invitation of Dr. Whitman Cross, chairman of the American Rose Society's committee on the national rosarium, to discuss progress which the committee has made thus far. The project, which includes as its chief feature the construction and maintenance of a rose garden as fine as any in the world, along with botanical collections, demonstration gardens, test gardens, laboratories, museums, library and full equipment for extended research, was outlined by Dr. Cross and received the whole-hearted indorsement of those present.

A site in the neighborhood of Washington which has been under consideration for some time was inspected in the afternoon by those who had not seen it, and it seems in every way adaptable and highly desirable. The relation of the whole site to the new memorial boulevard now under construction was explained by John Nolen, Jr., of the national capital park and planning commission.

The committee has been encouraged to go ahead with its work and prepare more detailed sketches and plans of the proposed garden for presentation to possible sponsors of the project. When it is realized that the project embraces a property of about 460 acres and that its contemplated cost of maintenance will run well over \$100,000 a year, some idea of the magnitude of the project will be conceived.

G. A. Stevens, Sec'y.

PLAN ILLINOIS MEETING.

The board of directors of the Illinois State Nurserymen's Association met in Chicago Thursday, November 1, to discuss plans for the next annual convention of the association, which will be held at the Hotel Sherman, Chicago, Wednesday and Thursday, January 16 and 17, 1935. The outline for a promising program was approved, and definite announcements will be made as soon as speakers have been contracted for. It was decided that no organized attempt should be made this year looking toward a trade exhibition, but space will be available for exhibits should they be desired.

FAIR AS MEMORY GARDEN.

A proposal to transform the grounds of A Century of Progress into a Garden of Memory has been made by the National Garden of Memory Association, which is sponsoring a movement for such gardens throughout the country.

Arising from the Garden of Memory established at St. Stephen's Episcopal church, Chicago, which attracts thousands of visitors annually, the association has inaugurated the establishment of such gardens and groves in widely scattered states.

Every tree remaining on the grounds of the fair after the buildings have been removed would be named for some person by an organization or civic group desiring to honor that person. For this privilege, according to the plan of the National Garden of Memory Association, \$5 would be paid to the park commission or to the commission which would have the Garden of Memory in charge. A bronze plate bearing the name of the person and the organization sponsoring the tree would be affixed.

Season's Business Shows Trade Gains

**Firms in Widely Scattered Sections of the Country Report
Fall Upturn in Trade and Improved Prospects for Next Spring**

Great interest exists throughout the trade concerning the character of the nursery business experienced in various sections of the country this autumn and the prospects for 1935. The American Nurseryman has therefore asked representative firms in one section and another to indicate how their sales this fall compared with those of a year ago and to provide some expression on anticipated trade. Several of the early responses are given in this article; more will appear in succeeding issues.

Optimism regarding spring trade apparently prevails, based on an autumn showing of sales that exceeded the 1933 fall totals, with the firms reporting so far. Postponed planting, due to adverse weather conditions, should also help to swell the 1935 business, it is estimated, while higher prices, already apparent in some instances, should be in order generally, it is agreed.

In New York.

One large wholesale nursery in New York state reports definitely larger sales during the fall this year as compared with last fall. Included was a much stronger demand for fruit trees, at rising prices, it was said, with many items selling for double what they brought a year ago. Roses, according to the same firm, are in much smaller supply than in 1933 and prices seem to be stiffening. Evergreens and some other ornamentals show an oversupply, but vines and shrubs in the smaller sizes are not plentiful and, with even the usual demand next spring, prices on these should advance.

The firm quoted in the foregoing paragraph has booked nearly double the orders for spring that it recorded at this season a year ago. In addition, reports from agency houses connected with the nursery show gains in sales of from twenty to thirty per cent over the 1933 figures.

Illinois Conditions.

An Illinois firm, while stating that the fall business was rather slow before the arrival of frosts, reports promising trade since they were recorded. Because the frosts did not develop until the last of October, ripening of the plants was delayed, with a consequent delay in planting. With plenty of moisture through the winter and early spring, the firm expects the 1935 trade to be much improved.

According to this nursery's reports from retailers and landscape men with whom it is in contact, business is spotty. While some of them speak of the best trade enjoyed in three or four years, others declare sales are still dragging. Chicago, Peoria and the cities in the northwestern part of Illinois seem to be experiencing the best business.

The fall trade forcibly brought out, according to the firm quoted in the foregoing paragraphs, that the supply of even some of the commoner shrubs in the smaller salable grades is short and that decided scarcities in some varieties of shrubs, as well as in some

fruit trees, will develop before the spring season ends. While a surplus remains in shade trees and shrubs of the larger sizes, 2 to 3-foot and 3 to 4-foot sizes are not plentiful. Privet promises to be exceptionally scarce next spring, it is stated.

Attention is called by the firm to the possibility that with a strong advance in prices on fruit trees in consequence of the sharp advance in wholesale prices, despite the obvious shortages that exist, buyers may hesitate to make purchases and thus fail to clear the supply. Such action would likely be followed by some lowering of prices.

It is particularly pleasing, it is said further, that the business at the present time is for small plantings rather than for government-subsidized projects. Although there has been considerable activity in Illinois with both the state and national government asking for quotations, so far this firm, along with other nurserymen, has received little business from such sources, it is stated.

Better in East.

Shortages of stock in many parts of the country are believed responsible for the improved trade recorded by the Diamond State Nurseries, Milford, Del., for which Lester C. Lovett reports as follows:

"We are enjoying somewhat better business this season than we did a year ago.

"Evidently the drought, which prevailed throughout a goodly portion of this country during the summer months, is responsible for there being quite a short supply of nursery stock such as we are growing in a rather big way—roses, grapevines and fruit trees of practically all sorts. Even hedge plants of some kinds are in rather short supply. Also, much nursery stock is being used on various governmental projects.

"Frankly, we anticipate an even greater improvement in business next spring, though we have no way of anticipating what the increase will be."

In Minnesota.

From Lake City, Minn., comes another heartening statement of increased business, by R. D. Underwood, president of the Jewell Nursery Co., wholesale grower of nursery stock, as follows:

"The past five months have given evidence of a steady improvement in business conditions. Orders for both private and public planting have increased in volume throughout the season. I believe that had it not been for the high temperatures which blanketed most of the country, together with lack of rain in the early months, there would have been a much larger amount of private planting this fall. With reports of plenty of moisture in nearly all sections this autumn, it would appear that nurserymen generally should experience a real comeback of business next spring.

"The upward trend of wholesale

prices reflects the reduced plantings of the past few years, and retail prices ought soon to be on a much more profitable level."

Ohio Report.

Howard N. Searff, manager of the nursery and fruit departments of W. N. Searff's Sons, New Carlisle, O., also presents an encouraging picture of the past season's business and expresses optimism about spring developments. His comments follow:

"Fall business was considerably better than we experienced for the past several years. There was more active interest shown by home owners both in new plantings and in repairing some of the damage done by the past few years of drought.

"With but few exceptions, fruit plants are not plentiful, and in many cases the supply will not be adequate.

"The price trend is upward, and it should be the duty of every nurseryman and nursery salesman to see that all quotations and competitive bids on nursery stock made this year are at least sufficiently above the cost of production to secure a fair margin of profit.

"Although conditions in general are still far from normal, we anticipate a better volume of spring business than last year in both wholesale and retail trade."

OREGON LANDSCAPE GROUP.

Charles H. Skinner was recently elected president of the Oregon Landscape Association at the annual meeting at Portland, Ore. Other officers are Adolph Meyer, vice-president, and Godfrey B. Wettstein, secretary-treasurer. Members of the board of control are James E. French, John G. Backer, Ernest Marki, Robert Isler, M. Nyberg and R. S. McHenry. The planning commission, to assist in beautifying public parks and golf courses, included Messrs. Meyer, Backer and Wettstein, Otto Haldeman, John Wildy and Charles H. Skinner.

LIME AIDS APPLE FERTILIZERS.

Experiments carried on over a period of four years in a Baldwin apple orchard in Wayne county, N. Y., by soil specialists at the state experimental station at Geneva have produced striking results on the use of nitrogen fertilizers and fertilizer combinations on apple trees growing on acid soil, according to a summary of the experiments presented in a new bulletin published by the station and available upon request. It was found that the addition of lime increased the effectiveness of nitrogen fertilizers where the nitrogen was present chiefly in the ammonia form and that the lime and ammonia nitrogen combination increased yields, gave a better quality of fruit and stimulated tree growth.

ROSS N. NEWTON recently opened a nursery at 716 West I street, Colton, Cal.

Variety in the Garden

Desirable New Materials for the South Described
by J. C. Watt, of the Armstrong Nurseries

No business can escape change, and this is certainly true of the nursery business. If one looks over the history of the trade from the early days one finds a succession of changes in styles. Plants come into favor, have a period of popularity, gradually become more commonplace and at last are used sparingly, if at all. This has been true of some of the finest plant subjects. Two that are again coming into immense popularity, which were popular many years ago, are fuchsias and camellias.

If the depression did anything for the American people, it caused them to be garden-conscious. It gave people time to enjoy their gardens and to work in them. It also changed the buying attitude of many of the people to whom formerly a plant was merely a plant. Now that they have time to study the situation they want not a plant, but a particular variety that will be something different from their neighbors' or something that will brighten their gardens with color. It seems to be a natural reaction from the drabness of life during the past several years to want a blaze of color in gardens.

Native Subjects.

Among California's native plants, many of which will give color in situations where few others will grow, is *Chilopsis linearis*, the desert willow of southern California and Mexico. The delicate beauty of these flowers resembles that of an orchid. The plant grows with little water and stands considerable coldness.

Fremontia californica, although it is difficult to transplant, is a hardy thing after it is once established. This is native in California foothills and likes a well drained soil.

Romneya Coulteri, the matilija poppy, will grow almost anywhere in well drained soil, and the big crêpe paper-like flowers are produced during the summer months.

Baileya multiradiata, which is becoming known as desert gold, is a real find from the Mojave desert. It is a perennial plant, growing to about two feet in height and making a clump with about the same spread. It blooms almost every day in the year and is especially full of blooms during the winter months. Being a native of the desert, this plant will grow with little water, although a reasonable quantity of water is required for constant bloom. It must have good drainage. This is an excellent border plant.

If color is wanted in the winter months in a situation where water is scarce, *Photinia arbutifolia* is hard to beat. The brilliant red berries of the California holly are not so appreciated as they should be.

Native to Brazil is *Ruellia macrantha*, which is hardy down to about 25 degrees and makes a showy everblooming shrub, four or five feet in height. It does best in partial shade, but will grow in full sun.

Clerodendron fallax is a striking subtropical shrub from Java. This is also

known as *Clerodendron speciosissimum*. It grows to about four feet in height and produces a long panicle of red flowers, which are extremely showy.

Echium fastuosum, commonly called the bee plant, is a native of the Canary islands and does wonderfully well in southern California.

From the Mediterranean region come the next two subjects. The first is *Cistus purpureus*, a hybrid between *Cistus ladaniferus* and *Cistus villosus*, which grows to four or five feet in height, with about the same spread. This plant is covered for several months in the spring with beautiful rosy lavender flowers, three or four inches across, with a deep maroon spot at the base of each petal and with a center of yellow stamens. From the same section comes *Helianthemum ocyroides*, having bright yellow flowers with a maroon red center. The flowers last only one day, but the plant has such a profusion of blooms that it is covered for several weeks after April 1.

There are a number of desirable subjects from South Africa. Certainly nothing can give more color in a landscape than a vivid *Mesembryanthemum speciosum*. This is so bright that it almost hurts one's eyes to look at a patch growing in the sunlight. Also from South Africa is the red gazania, which may be a hybrid and for which I have no botanical name. This is a brilliant flower, and a bed of these will certainly give color.

Aster fruticosus is also a native of South Africa, making a beautiful shrub about three feet high, the lavender flowers being one to one and one-half inches across and when in full bloom covering the entire plant. *Strelitzia Reginae* is another native of South Africa that has become popular in southern California and is especially fine for winter bloom in protected locations.

Contributions from Asia.

Asia and the orient have provided many fine plants. *Buddleia alternifolia* is a fine hardy buddleia growing up to twelve feet in height, with slender arching branches completely covered in the spring with myriads of little lilac flowers. This buddleia should not be pruned back heavily, like the other buddleias, since it bears on the old wood. The plant is from Yunnan province, in China, the scene of the terrible famines of a few years ago.

A naturalized Chinaman, having been developed in California, is *Cotoneaster Parneyi*, one of the finest berried shrubs, with large glossy leaves and exceptionally large berries, which remain on the plant over a long period.

Another fine plant, deciduous in nature, is the lavender crêpe myrtle, a native of China, which, however, has been developed in this country. The soft lavender flowers of this variety do not clash with any landscape picture. This is one of the finest of the crêpe myrtles.

Syringa persica laciniata, or cut-leaved Persian lilac, is a native both of Persia and China and is more at home in southern California than any of the other de-

ciduous lilacs. The flowers are not so large as some of the eastern hybrid lilacs, but they are fragrant and are produced every year without fail.

Among the desirable deciduous flowering trees is *Prunus Mume*, the early-flowering Japanese apricot. These trees bloom by January 12 in California.

The early double pink-flowering peach comes in after the *Prunus Mume*, and the different varieties which are now available continue the bloom over a great part of the spring. There is probably nothing finer for color in the early spring than a group or an avenue of these flowering peaches.

The list of flowering trees includes *Calodendrum capensis*, from the Cape of Good Hope, a tree growing to about seventy feet in its native South Africa and covering itself with bloom during the spring and early summer, the flowers continuing through the summer in smaller quantities. This tree is hardy and should be used much more extensively.

Next is *Bauhinia purpurea*, from India and China, the tree growing up to forty feet in height and producing its orchid-like flowers over a long period in the spring and early summer.

The red pod tree, *Harbullia arborea*, from the South Sea islands, is an extremely interesting tree. It is particularly adapted for use in patios where a tree of medium size is required and where an exotic specimen is appreciated. The fruits break open, exposing the scarlet pods, which remain on the tree for a long period. *Eucalyptus ficifolia* is undoubtedly a tree which will be used more as time goes on, since it does not become too large and gives fine color.

Vines.

In vines, one of the most showy in the wintertime is *Bignonia venusta*, sometimes called *Pyrostegia ignea*, from Brazil. It is one of the finest winter bloomers for a fairly warm situation. *Thunbergia grandiflora*, the sky flower, from India, makes a strong-growing vine, fairly hardy, producing flowers almost the entire year around. *Bignonia cherere*, from Mexico, blooms over a long period and gives strong color.

The next two can be used either as climbers or as shrubs, the first being *Tecoma grandiflora*, sometimes known as *Campsis chinensis*, from China, a deciduous vine which is not used so much as it should be. A vine of this variety will give blooms from spring until late in the fall every day. The darker variety, called *Mme. Galen*, is preferred by some. *Tecoma capensis*, or *Tecomaria capensis*, as it is sometimes called, from South Africa, is one of our finest winter-blooming shrubs or vines, the bright red flowers against the dark green foliage being highly attractive during the winter months.

Hamelia patens is not at all well known in California as yet, but a great future is predicted for it. It is native to southern Florida and the West Indies and is, therefore, rather tender. However, it produces such an abundance of bright copper-colored flowers and makes such a thrifty bushy plant it will find a great deal of favor.

A favorite is *Thryallis brasiliensis*, with yellow flowers produced from fall through the winter until spring. This, as well as *Hamelia patens*, makes a shrub three or four feet in height, with about the same spread eventually.

New Large-Size Shrubs

L. C. Chadwick Describes Varieties of Deciduous Shrubs
Growing from Ten to Thirty Feet High Worthy of Attention

It is the purpose of this article to discuss some of the worthy large deciduous shrubs, those ranging from ten to about thirty feet in height. Deciduous plants in this size group may be of two general types of growth. They may be shrubby, with a number of stems from the base of the plant, or they may be more upright and tree-like with only one trunk issuing from the ground. It is to the former, the shrubby group, that I should like to confine my remarks at this time.

These large shrubby plants constitute one of our most useful groups of plants in landscape work. Many can be used in borders to provide privacy for the garden area. Others make pleasing specimens because of attractive flowers and fruits, in addition to good green foliage throughout the growing season of the year. The plants discussed here-with should be grown in sufficient quantities by nurserymen so that they may be used more abundantly in landscape plantings.

From Southeastern States.

Aesculus parviflora, bottlebush buckeye, a native of the southeastern states, is not used or appreciated so much as it should be. Few of our large shrubs are as outstanding in flower, foliage and adaptability to trying locations. During the latter part of July and early August this spreading shrub is covered with pinkish white flowers borne in upright clusters, ten to twelve inches long. Few shrubs flower so abundantly at this time of year. The plant makes an excellent screen when grown in rich, moist soil, and the lower branches are held well to the ground. The bottlebush buckeye does well in shade if the soil is not too dry. In dry, poor soils it is apt to become rather loose and open. Even though the leaves fall rather early in the autumn, it is an excellent plant to use for screen purposes or as a specimen.

Albizia julibrissin rosea is a broad spreading shrub or small tree of use to southern nurserymen and landscape gardeners. The delicate, compound foliage is attractive, and when accompanied by the bright pink, pea-shaped flowers in June and July, it makes an excellent decorative plant.

Cotoneasters Again.

Because of the outstanding characteristics possessed by the cotoneasters I cannot refrain from mentioning again some of the outstanding species and varieties that belong to this group. Among those with red or scarlet fruits are *Cotoneaster acuminata*, *C. racemiflora songarica*, *C. racemiflora Veitchii* and *C. Simonsii*. Those with black or purplish black fruits are *Cotoneaster acutifolia*, *C. foveolata*, *C. lucida*, *C. moupinensis* and *C. obscura cornifolia*.

The various species of *enkianthus* are exceedingly attractive shrubs in both foliage and flower. Two of the most common species are *E. subsessilis*, *Nikkoe enkianthus*, and *E. campanulatus*, the red vein *enkianthus*. *E. sub-*

sessilis is the smaller of the two, attaining a height of about ten feet at maturity. The plant becomes wider than high at maturity and is perfectly compact, holding its branches clothed with glossy, bronze-tipped leaves well to the ground. The flowers are white, appearing in May. One of the most striking features of *E. subsessilis* is the striking, brilliant red autumn foliage.

Enkianthus campanulatus is a larger plant, reaching a height of thirty feet at maturity when given good growing conditions. It is more often seen at a height of about eight to ten feet and is higher than broad. The yellowish, bell-shaped flowers with red veins are borne in pendulous clusters in May. Few shrubs possess the outstanding qualities shown by the *enkianthus*. The neat, red twigs, glossy, dark green foliage, crowded near the ends of the twigs, attractive bell-shaped flowers in clusters and brilliant fall foliage color leave little to be desired in these decorative shrubs. Possibly the most serious objections to their more plentiful use are their slow growth, an acid soil requirement and the necessity for plenty of moisture. They are most effectively used in masses or combined with such broadleaf evergreens as *azalea*, *kalmia*, *leucothoe* and *rhododendron*.

Fothergilla.

Fothergilla major and *F. monticola*, two native shrubs of the southeastern United States, are rarely seen in nurseries or landscape plantings, but they possess attractive foliage and a unique flower. *Fothergilla monticola* is medium-size to about six feet and should not be classed in this size group, but is mentioned here so that the two species may be discussed together. The *fothergillas* are related to the witch-hazels, which they resemble somewhat in leaf. *Fothergilla major* reaches a height of twelve feet and has nearly as wide a spread. It is a compact bush, bearing dense spikes of white flowers in early May just as the plant comes into leaf. *Fothergilla monticola* is more loose and spreading, but has slightly larger flower spikes. The fall foliage color, much like that of the witch-hazels, is orange yellow. These shrubs prefer a slightly acid, light or peaty, well drained soil. Although rather difficult to grow and slow to establish themselves after being transplanted, the *fothergillas* make attractive specimen plants or filler material for the border.

Native Shrubs.

Most nurserymen and landscape gardeners are acquainted with *Leucothoe catesbaei*, a broadleaf evergreen, but seldom do we see any mention of *Leucothoe racemosa*, a native plant from Massachusetts to Florida and Louisiana. In general appearance this species of *leucothoe* is much like *Clethra alnifolia*, the summer sweet. Of slow growth, this plant reaches a height of more than ten feet and bears small, pinkish white flowers in upright, spreading clusters. The bright green leaves

turn to a brilliant scarlet color in fall. Doing best in a moist, acid soil, this deciduous shrub is fine for use in beds with broadleaf evergreens or as a specimen plant.

Nemopanthus mucronata, mountain holly, is another native shrub that is seldom seen in cultivation, although it is striking in its native habitat. In general appearance it resembles the common winterberry, *Ilex verticillata*, except for its smaller leaves. Reaching a height of ten to fifteen feet and with a spread of twenty to twenty-five feet, the plant is well branched and compact where it has plenty of moisture, a little shade and an acid soil. The flowers are unimportant, but the red fruits are borne abundantly, as with the winterberry. Since the sexes of this plant are apt to be separate, fruiting plants or plants of both sexes should be planted to assure the production of fruit.

Viburnums.

In the genus *viburnum* we have some of our most important deciduous shrubs. Most of the *viburnums* are large shrubs at maturity, coming well within the size range of this group. Even though I have mentioned the *viburnums* consistently in previous articles, I cannot refrain from discussing them again to some extent. Among the *viburnums* which may be included in this group are *betulifolium*, *cassinoides*, *dentatum*, *dilatatum*, *fragrans*, *Jackii*, *Lantana*, *Lentago*, *prunifolium*, *rufidulum*, *Sieboldii*, *theiferum*, *tomentosum*, *tomentosum plicatum*, *tomentosum Mariesii*, *venosum*, *venosum Canbyi* and *Wrightii*. Many of these species are commonly thought of as being somewhat smaller than this size group. Such might be especially true of *cassinoides* and *dilatatum*, yet at the Arnold arboretum I found *cassinoides* growing to a height of approximately twelve feet with a 10-foot spread and *dilatatum* reaching ten feet in height and fifteen feet in width. Others such as *fragrans*, *Sieboldii*, *theiferum*, *tomentosa* and varieties and *Wrightii* may be considered as reaching a maximum of about ten feet at maturity. Additional points of information of some of these *viburnums* will stress their importance. *Fragrans* will be remembered as a new addition to the group, with fragrant, pinkish white flowers in early spring even before those of the popular *Carlesii*. *Cassinoides* has been greatly underrated. In foliage and fruit it is equal in beauty to any of the *viburnums*. *Betulifolium* is a rare type, upright and compact, and bears red fruits. *Jackii* is another new type, a hybrid between *prunifolium* and *Lentago* and promises to become a useful addition.

The *viburnums* are useful in many ways. *Dentatum*, *dilatatum* and *venosum Canbyi* are useful as the smaller screen types. *Lantana*, *prunifolium* and *Sieboldii* make wonderful screen plantings of larger sizes. *Cassinoides*, *dentatum* and *venosum Canbyi* are among those with the most attractive foliage. For red fruits, *dilatatum* and *theiferum*

are best, although one should not forget americanum and tomentosum, with its horizontal branches, flat flower clusters and fruits that are red at first, finally changing to black. For the snowball type of flower, use tomentosum plicatum, rather than Opulus sterile; although the former is not quite so hardy, it is free from pests.

The variation in growth habit, size and color of foliage, flower and fruiting habit would allow one to make an entire border planting of only viburnums and still it would not be monotonous. Nurserymen and landscape gardeners certainly cannot go wrong in propagating and using many of these plants.

TWIN CITY NURSERYMEN.

The Twin City Nurserymen's Association will open its winter program of meetings with a dinner at Wade's restaurant, on West Lake street, Minneapolis, Minn., Wednesday evening, November 21. This first fall session was originally planned for November 14, but was postponed because the annual banquet of the Minnesota State Horticultural Society was held on that date.

PLANT BUREAU ASSISTANTS.

Frederick D. Richey, chief of the bureau of plant industry in the United States Department of Agriculture, announced November 3 the appointment of Dr. M. A. McCall and Dr. E. C. Auchter as assistant chiefs of the bureau. Both occupy important positions in the bureau, Doctor McCall as head of the division of cereal crops and diseases, and Doctor Auchter as head of the division of fruit and vegetable crops and diseases. In addition to their new duties, both Doctor McCall and Doctor Auchter will continue to direct the work of their respective divisions. H. E. Allanson, who as assistant chief of the bureau has been in charge of the administrative operations for the bureau, will continue in the same capacity with the title of business manager.

NAPHTHALENE FOR JAP BEETLE.

The gas given off from naphthalene crystals is deadly to the grubs of the Japanese beetles in the soil. Eggs and larvae of this destructive garden and orchard insect pest, entomologists of the United States Department of Agriculture find, turn red when exposed to naphthalene fumes and then die. The fumes are destructive to plants; so this insecticide cannot be applied safely to infested soil after planting time. Its usefulness is therefore restricted to disinfecting soil which is to be used in greenhouses or for potting plants.

Scattering naphthalene crystals through potting soil at the rate of five pounds to the cubic yard effectively destroyed eggs and larvae of the Japanese beetle in the tests conducted by the department. The soil to be treated in this way, the entomologists say, must be moist, but not wet, and free from large lumps, have a temperature above 50 degrees and remain undisturbed for a week. Under such conditions the naphthalene flakes decompose rapidly, normally disappearing within fourteen days. The vapor thus liberated paralyzes the larvae and finally causes their death.

OBITUARY

Mrs. Anna Jensen.

Mrs. Anna Jensen, wife of Jens Jensen, landscape architect of Chicago, Ill., died November 4 at her home at Wilmette, Ill. Mrs. Jensen was 74 years of age and had been ill for two years. Her husband was former general superintendent of the west parks system at Chicago and is now president of the Friends of Our Native Landscape Association.

Mrs. Jensen was born in Bybbol, Denmark, and came to this country in 1884. She is survived by Mr. Jensen and her four children.

Ira Williams.

Ira Williams, veteran nurseryman of Jamestown, N. Y., died November 3, at his home on Strunk road, Ellicott, N. Y. He was 81 years old and was active in the business until his health failed a short time ago.

Mr. Williams was born at Springboro, Pa., but lived in the neighborhood of Jamestown for forty-eight years. He is survived by his widow, Carrie Reynolds Williams; two sons, I. Marshall, Ellicott, and Myrl J., Jamestown; a daughter, a brother and a sister.

George H. Koen.

George H. Koen, formerly a nurseryman and landscaper of Memphis, Tenn., died October 22, at the Veterans' hospital, St. Petersburg, Fla., where he had been a patient for about a half-year. Mr. Koen was 55 years old and a veteran of the Spanish-American and World wars.

At Memphis he was a member of the Koen nurseries, founded more than 100 years ago by his grandfather. About five years ago he moved to Sarasota, Fla.

Mr. Koen is survived by his widow, the former Ida Greer; three sons, George, Jr.; John, and Searcy; a daughter, Miss Anne; a brother; a sister, and a half sister. Funeral services and interment took place at St. Petersburg October 23.

William Welton Harness.

A retired nurseryman of Roy, Utah, William Welton Harness, 82 years old, died October 29 at Roy, of illness caused by old age.

Mr. Harness was born at Moorefield, W. Va., a son of the late John George and Jane Amelia Welton Harness. He was educated at Moorefield and was married there to Miss Kate P. Shearer, who died there thirty-five years ago. Moving to Utah thirty years ago, Mr. Harness entered the nursery business at Roy, with a brother, E. J., who survives him, as do a son, John P. Harness, Hagerstown, Md.; a sister, and six grandchildren.

Funeral services were held at the Kirkendall-Darling mortuary chapel October 31, with interment at Mountain View cemetery.

THE name of Clayton & Mason Nurseries, Inc., Redwood City, Cal., has been changed to Clayton Nurseries, Inc., Mr. Mason being no longer connected with the firm.

AMERICAN NURSERYMAN

PARTNERS BUILD NURSERY.

On Rose and Perennial Specialties.

At New Brunswick, N. J., in 1921, Somerset Rose Nursery, Inc., was started by August W. Bosenberg and Louis C. Schubert. Mr. Bosenberg was born of a family of prominent florists and nurserymen in Germany. He was trained according to the European principles of the craft practically from childhood. Immigrating to the United States in 1914, several months previous to the outbreak of the World war, he worked in several trade establishments until he finally decided to go into the growing of rosebushes, of which there happened to be a great shortage at that time.

Mr. Schubert spent several years in studying the business with the idea of becoming a florist, but the outdoor work appealed to him more than store work and he also became interested in growing roses. He started business in New Brunswick in 1920 and the year following persuaded Mr. Bosenberg to join him. The firm was incorporated in 1927.

Roses First Specialty.

For several years after its organization the nursery produced a considerable quantity of roses, most of which were sold wholesale, and built up a reputation for quality stock. However, as the market was invaded by western growers, who could produce good stock cheaper than it was possible to do in the east, the firm slowly curtailed its production of roses until now it produces but a fraction of what was grown several years ago.

From the start, both the partners have been intensely interested in delphinium and phloxes and have always grown a large number of both of these plants. As the production of roses was curtailed, the number of perennial plants was increased, until now a complete line of hardy perennials is carried. The specialties are hardy primroses, phloxes, delphinium, grafted Gypsophila Bristol Fairy and bleeding hearts. With an aim to produce the highest quality of stock and to give the best possible service, the result has been that, in spite of the depression, steady progress has been made during the past years.

Success with The New Dawn.

A number of years ago the operators of the nursery had the opportunity to observe an unusual plant of the climbing rose, Dr. Van Fleet. Instead of blooming once in June, this plant continued to flower throughout the summer as freely as a hybrid tea. Collaborating with the discoverer of this novelty, the firm tested the plant for a number of years until it was finally decided to put it on the market as a new and distinct variety.

Just about that time, Herbert Hoover signed the plant patent act and it became a law. Immediately a patent on the new rose variety was applied for and the nursery was fortunate enough to have the honor of being granted the first patent ever given any plant. In consideration of the new era for plant breeders and the fact that this rose opened up a new vista of what might be expected of climbing roses in the future, the rose was named The New Dawn. Production and sales on this variety have been steadily increasing from the time of its introduction.

Handling Natives

Methods of Growing and Selling Native Plants at Nursery Described by W. A. Toole

It is not a simple task for the commercial grower to keep up with the public's interest in native plants. Not only must much of the stock be searched for, but there is considerable to be learned about maintaining it. Also, to aid the growers of the plants, efforts should be made to supply them with sufficient information to assure them some measure of success.

One system that I used, which seemed to contain possibilities, was to have prepared by an authority three planting plans for as many groups of natives. Even though the conditions described were not met exactly by the gardener, the plans helped him to place the plants in the best relative position.

Special Collections.

One collection was designated for a prairie garden. In this the following subjects were included: *Gaillardia grandiflora*, *Asclepias tuberosa*, *Baptisia australis*, *Rudbeckia purpurea*, *Liatris pycnostachya*, *Artemisia frigida*, *Monarda fistulosa*, *Eriogonum fruticosum*, *Coreopsis lanceolata*, *Boltonia asteroides*, *Petalostemum purpureum* and *Pentstemon gracilis*. It will be noted that these are perennials almost sure to be satisfactory in hot dry situations where many others would fail. Although they are natives, they include many that are accepted garden favorites.

A second collection included showy prairie wild flowers for sunny habitats. These particular varieties withstand drought conditions and give a better display than many of the more familiar perennials. The selection contained *Heliopsis pterocarpa*, *Liatris scariosa*, *Tradescantia rosea*, *Phlox pilosa*, *Dodecatheon media*, *Opuntia Rafinesquel*, *Phymosia remota*, *Coreopsis palmata*, *Boltonia latifolia*, *Aster linariifolius*, *Euphorbia corollata* and *Pentstemon grandiflorum*.

A third collection, for the north side of a house or similarly shaded situation where there is no competition with tree roots for moisture, was recommended as follows: *Cypripedium pubescens*, *Aetna rubra*, *Aster novae-angliae*, *Epilobium angustifolium*, *Eupatorium urticifolium*, *Hepatica acutiloba*, *Lobelia cardinalis*, *Podophyllum peltatum*, *Phlox divaricata*, *Smilacina racemosa*, *Trillium grandiflorum* and *Viola canadense*.

Soil Requirements.

Most of the wild flowers need a good garden soil that is rich in humus. They will not thrive in stiff clay or poor sand. It is often advisable to dig out the space to be devoted to natives and fill in to the depth of about eight inches with suitable soil.

So much has been written about the need of acid soil for some kinds of wild flowers that one is likely to think that most of the wildings need acid in their diet. Those that do require acidity will accept no halfway measures, but, fortunately, nearly all the natives are either indifferent to soil acidity or find their requirements in the rotted leaves provided for them.

Where acidity is required, the surest

way to provide the proper soil is to obtain that in which the particular plant has grown. Otherwise, high acidity can be attained by the liberal use of pine needles or rotted sawdust. Chemicals such as tannic acid or sulphate of ammonia can be used, and the addition of finely powdered sulphur aids in maintaining or increasing soil acidity.

It is far better to urge customers to grow only a few wild flowers in well prepared soil than to attempt more where soil conditions are poor. They should have watering facilities to reach the wild flowers, especially if the garden is on the north side of the house; in the central west the rains come mostly with southwest winds and the plants may not get enough moisture naturally if sheltered to the south.

Seasonal Display.

Wild flowers that require or will grow under shaded conditions are mostly those that flower before or soon after the trees have reached full leafage. After the middle of June, interest in the wild garden must be largely maintained through the use of ferns and other plants with pleasing foliage, together with such berried plants as the haneberries, blue cohosh and jack-in-the-pulpit. In the fall, one may add color and interest to the spring garden by the use of a few plants of some of the smaller-flowered native asters, *Eupatorium urticifolium* and bottle gentians.

The sun-loving wild flowers of the prairies, fields and sand dunes and of the open bogs and swamps have more brilliance of color than those from the shade. The former are beautiful from spring until November.

There is a host of low-growing sun-loving wild flowers that are suited to the sunny rock garden where, with a little care, they will thrive as they rarely do when faced with the keen competition of other wild flowers and grasses and the far-reaching roots of shrubs and trees.

Improvements under Cultivation.

It is also surprising to find that many wild flowers will do amazingly well under conditions greatly different from those under which they are found growing wild. Often varieties that are found native only in poor sand or near-bog conditions will grow more luxuriantly when cultivated in common fertile garden soil. Apparently these kinds are forced to grow in the seemingly less desirable places only because there they are free from the choking growth of rank-growing plants.

Many of the wild flowers usually found in loose sandy soil have long tap-roots and are, for this reason, difficult to transplant successfully from the wild. When this is the case, dig only young plants, which transplant more easily, or better still, try growing them from seeds.

Many of the taller sun-loving natives have already been accepted as culti-

vated plants and are hardly thought of as wild flowers. Many others equally good are gradually finding their way into general cultivation. Each section of the country has a wide variety of flowers and ferns that belongs to it. However, these kinds overlap into other sections in varying degrees. If some attention is given their individual needs, plants from many regions can be handled along with those from the grower's own territory. The possibilities of wild flower gardening are, as a result, almost endless.

R. F. C. LOANS AVAILABLE.

Industrial concerns, eligible to borrow funds from the Reconstruction Finance Corp. for the purpose of maintaining and increasing employment, have not yet taken full advantage of the assistance which the corporation is prepared to extend, according to a statement issued by Jesse H. Jones, chairman of the board.

Congress provided that such loans might be made to industrial and commercial businesses subject to the following requirements:

- (1) That the business must have been established prior to January 1, 1934.
- (2) That such loans be adequately secured.
- (3) That maturity of loan must not exceed five years.
- (4) That borrower must be solvent at the time of disbursement of the loan.
- (5) That credit at prevailing bank rates for loans of the character applied for not be available at banks.
- (6) That reasonable assurance of increased or continued employment of labor be given.
- (7) That the aggregate of such loans to any one borrower made directly or indirectly shall not exceed \$500,000.
- (8) That such other provisions as the Reconstruction Finance Corp. may impose be complied with.

"The directors of the Reconstruction Finance Corp.," reads Mr. Jones' statement, "feel that these loans should be made in such a way that the available funds can be utilized as fully as possible for the advance of permanent business recovery. This objective can be accomplished best if the moneys loaned by the corporation are used principally to supply funds for the payment of labor and the purchase of materials incident to the normal operation of the business, rather than for the payment of existing indebtedness, though in exceptional cases a small part of the loan may be used for payment of existing debts or for the financing of construction, improvements and/or repairs that do not materially increase capacity. When a loan is to be used primarily for labor and materials, a small portion of the loan may be applied to these latter purposes when necessary to assure ordinary and efficient operation."

"The corporation will make loans in cooperation with banks, or by the purchase of participations in loans made by banks. In cases of national banks, only the bank's participation in such loans, rather than the full amount of the loan, must be within the legal limit which may be loaned to any one customer, and accordingly this plan will allow substantially greater credit to be extended through such channels to bor-

(Concluded on page 15.)

Herbaceous Perennials

C. W. Wood Comments on Less Common Varieties of Hardy Plants Deserving Attention

RAMONDIA.

Some horticultural writers have seemingly irreparably damaged the reputation of the ramondia among gardeners by their slanderous talk about the plant's ungracious behavior in gardens. The talk about the ramondia's being hard to manage kept me from enjoying it for years. If a grower approaches ramondia with fear and trembling, he is sure to fail with it because of too much attention; on the other hand, if he expects the plant to respond to the care he gives to cabbages, he is doomed to disappointment. There is a middle course, involving close attention to a few details, which leads to almost sure success. In no case is any ramondia to be treated lightly in the climate of eastern United States. And it is not to be trusted in the hands of inexperienced gardeners.

First, as to garden treatment: Best success here has come from planting in a vertical crevice in a northward-facing wall. Such a position is not absolutely essential, for a north slope sheltered by an overhanging rock will produce good results. What is desired in our climate in the middle west and throughout all the eastern United States is to keep the plant from the hot sun and from too much moisture around the crown. Given these conditions and a moisture-retaining soil, preferably one containing a quantity of peat, and no ramondia, except *R. Heldreichii*, should give a gardener much trouble. I cannot mention any method of commercial culture for ramondias and call it the best, for I have never grown them commercially. My limited experience leads me to believe that pot culture in a shaded frame, with the plants sold at the age of one year, would be best. They come quite readily from fresh seeds. Experienced European cultivators of the genus say that all of the species can be grown from leaf cuttings, following the plan used in growing *Rex begonias*.

ANCHUSA BARRELIERI.

Of all anchusas that I have grown, *A. Barrelieri* is the best for cutting, yet one seldom sees the plant except in the gardens of amateurs, and not often there. Here is a good cut flower in a useful shade, cobalt blue. It is not new or rare, nor hard to grow.

It is a bushy plant, growing to twenty inches in height and that much, or more, across, with its flowers close together on the stem. Its height adapts it to many uses in garden work, and its color makes it a good companion for many of the yellow flowers of May, when it is at the height of its beauty. It is not normally so long in flower as some anchusas, though it will bloom intermittently during the summer, if not allowed to make seeds, and is sure to give a good crop of flowers in the fall. It is reliably perennial and is probably best grown from root cuttings in spring soon after growth has awakened. It prospers in a good soil in the sun.

JEFFERSONIA DIPHYLLA.

The third President of the United States, Thomas Jefferson, is honored in the generic name of *Jeffersonia diphylla*, and gardeners are privileged to enjoy in it one of the real aristocrats of American flora. Not at all showy is the twinleaf, depending for its charm upon the purplish tints of the pips as they emerge through the somber-colored leaf mold, the same shades in stem and leaf in their earlier stages and the pure white of its inch-wide flowers. There are refinement and beauty in this plant. It is essentially a woodland plant and is seen at its best only in leafy soil and shade. Its height of a foot at maturity is usually twice its stature at flowering time. This is a plant that should find ready acceptance among gardeners at this stage of popularity of wild gardens. Seeds planted in an outdoor frame in fall should show good germination in spring and the resulting plants should make blooming specimens the second and third years.

ACHILLEAS.

Many achilleas are lacking in the characteristics which make a good garden plant. Out of a large collection of species sent to me by a botanic garden a number of years ago, more than three-fourths had to be destroyed, owing to their weedy and encroaching habits, a single plant of one species taking entire possession of a frame 2x3 feet in one season. Of the kinds that I have tried, the following deserve special mention: Three little, white-flowered, silvery-leaved species, *A. argentea*, *A. Clavennae* and *A. umbellata*, are particularly desirable for the rock garden. Their greatest value is their lovely silvery foliage, which is useful in any sunny spot in the rockery. None of them is hard to manage, though all require more moisture than is usually associated with the genus. Any, or all, of these three species would make a good addition to the list of a grower of rock garden plants.

The loveliest foliage of any achillea that I have ever grown is possessed by *A. holosericea*, the leaves being covered with silvery silk hairs. If I have the

true species, I should place this among the best of the border achilleas, and its height of twelve inches does not bar it from the large rockery. It, too, is mostly valued because of its foliage, the flower being inferior to that of *A. filipendulina*, *A. sericea* and others. Unfortunately, it has been rather short-lived in my garden, but it is easily rejuvenated by dividing and planting in fresh soil when it starts to go back.

A. sericea is of far more value than its infrequent appearance in gardens would indicate. In it we again find a silvery plant, though in this case the leaves are silver gray, while in those of *holosericea* the leaf color is green and the silky hairs are silver in color. The flowers of *A. sericea* are a soft golden yellow, coming in large heads from June until frost. Its only fault, so far as I have found, is its spreading habit.

The only achilleas that I have ever had which were at all hard to manage were *A. Herbarota*, a tufted alpine with undivided green leaves, and *A. moschata*, with pinnately parted, green leaves. From their behavior here, I imagine they need moraine treatment, and their garden value is not great enough to deserve that amount of care, lacking, as they are, in the silvery foliage other easily grown species possess. All achilleas are easily multiplied by division or by seedage, and the alpine forms, at least, may be further increased from cuttings.

AMPELOPSIS ACONITIFOLIA.

The monkshood vine, *Ampelopsis aconitifolia*, so named because of its monkshood-like leaves, has been in the United States close to a century, yet seems to have attracted little attention in that time. To be sure, it cannot compete with Boston ivy, *Ampelopsis tricuspidata*, lacking the clinging facilities which make that vine so good a substitute for English ivy (*hedera*) in cold climates. But the finely cut foliage of *A. aconitifolia*, which is even more finely divided than any of the monkshoods, its airy grace and the blue berries which turn orange red as they ripen make it a desirable vine. It may be grown from seeds or from cuttings. Probably the easiest way to accomplish the latter is the method recommended by Rehder: "Cuttings with a good eye, placed in sandy soil under bell-glasses in September."

SPIRÆA TRICHOCARPA.

As everyone knows, *Spiræa Vanhouttei* is a good plant. Why, then, the plant lover asks, overdo an excellent thing? Instead of working it into the class of the peegee hydrangea, why not relieve it with something equally good, or even better, and give both plants a fighting chance? In *Spiræa trichocarpa* we have something as good as Van Houtte's variety, yet it is not made to replace the latter, but rather to supplement it. The differentiating character, so far as garden effect is concerned, lies in the fact that the flower of *S. trichocarpa* is larger and later. Late blooming is the plant's greatest value, for it extends the season of bloom of this type of spiræa, nullifying the most effective criticism against Van Houtte's variety. The plant is easy to grow from cuttings like other spiræas of this class.

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GRAPE PRUNING AND TRAINING.

The pruning and training of grapes is a much less complicated operation than the pruning of fruit trees once a few fundamentals are mastered, declares Prof. F. E. Gladwin, grape specialist at the state experimental station at Geneva, N. Y., who has prepared a brief circular setting forth the chief things to be considered. A copy of the circular may be obtained upon request to the station.

Before attempting to prune grapes, the pruner must understand how the grape bears its crop, says Professor Gladwin. The fruit is borne near the base of the shoots of the current season and the shoots are borne on the wood of the previous year's growth. Assuming that a thrifty Concord grapevine should yield fifteen pounds of grapes, provision must be made for a sufficient number of bunches of grapes to give the desired yield. As each shoot bears two or three bunches which will weigh from a quarter to one-half a pound, it will be necessary to leave fifteen to thirty shoots on the canes of the preceding year. Pruning consists of selecting the canes that supply the required number of shoots and removing the remaining canes. Grapes are also pruned to make well proportioned plants, with the parts so disposed that the vines are to the highest degree manageable in the vineyard. This is training. Grape growers usually speak of both operations as "pruning," but it is well to keep in mind that the two have different objectives.

Winter pruning is advocated, although it is stated that pruning can be done without danger of injuring the vines at any time after the leaves drop in the fall until the buds swell in the spring, providing the wood is not actually frozen at the time. However, pruning should be delayed until after a heavy freeze in the fall, so that immature wood will be killed and withered and can thus be easily identified and removed, it is said.

After giving general directions on pruning and on the construction and care of the trellis, Professor Gladwin tells about the training of grapes in the eastern United States. The four methods commonly used in New York are described and illustrated, including the Chautauqua, the Keuka high renewal, the single-stem 4-cane Kniffen and the umbrella Kniffen systems.

PEAR BORER CONTROL.

Control of the sinuate pear borer, one of the most serious insect enemies of the pear, which has consisted chiefly in the past in the detection and removal of the larva or grub from infested trees, has been made much more effective by the use of arsenical sprays directed against the adults during their active feeding period in June, according to information given in a new bulletin, prepared by Dr. Hugo Glasgow, issued by the state experiment station at Geneva, N. Y. From his experiments and observations on the life history of the pear borer, Dr. Glasgow recommends three things for the control of the pest: First, the destruction, so far as practicable, of all wild host plants and old and worthless pear and quince trees that might harbor the insect. Second, the systematic removal of all borers that can be detected in young or smooth-barked trees. Finally, thorough spray-

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ing of the orchard with lead arsenate at the rate of four to five pounds to 100 gallons about June 10, to be followed by a second treatment two weeks later. A third spray ten days after the second application may be warranted where invasions by the beetles from surrounding plantings are feared.

TIMELY CAUTION.

Reiteration of the old advice of caution in credit transactions is particularly in order now that business is on the increase because of the changes in the trade during the past three or four years. Some firms whose names were once a sufficient credit rating in themselves are now in receivers' hands. Other once illustrious names are now tarnished. Shipment on account just because you have heard frequently of the firm is not warranted without credit investigation.

Also, many newcomers are in the field. Some are offshoots of old enterprises and

are doing well. They have made headway fast, are financially responsible and merit credit. But others as newly in business are not well established and likely will not last long. It is necessary to discriminate before one grants credit or makes shipment on open account.

There is nothing to equal a good credit file of one's own, with information recorded as to business changes as they appear in the trade press, but few such individual credit files exist. There are credit rating services available, and they are cheap in comparison with the money one may save by consulting them before shipping. To the infrequent shipper, the advertising and news columns of The American Nurseryman afford information twice a month, if he takes the time to keep posted. Most essential is the recognition that good business practice requires care and conservatism in granting credit or in making shipments of perishable merchandise without payment or satisfactory references.

The Current Season

W. N. Craig's Notes from New England

MILD AUTUMN.

While October was much colder than normal, there were no low readings recorded during the month, and frost failed to touch even the most delicate plants in many sections. November has been a quite pleasant month and, with one-third of it gone, we have had so little freezing that most of the hardy chrysanthemums are still unscathed. *Buddleia magnifica* and *Ile de France* are blooming freely; violas, pansies and violets are full of bloom; Iceland poppies remain as colorful as two months ago; some gentians are still flowering; young plants of *Hamamelis mollis* are in full bloom; *Helleborus niger altifolius* has many flowers open, while the other white form, *præcox*, is barely starting to push up its flower stalks. Some weather prophets are predicting another rigorous winter, others just the reverse. One man's guess is probably as good as another's when it comes to predicting either the outcome of a political election or the weather. The former has passed and it remains to be seen how the result will affect general business, including our own.

Nurserymen have not fared too badly this fall. All could easily have cared for more business. There remains too much price cutting, and some are barely able to keep going, but the prospects are surely better than a year ago. Just now there is too much dog eat dog and the devil take the hindmost in the nursery trade. The prices in retail catalogues of nursery stock remain no criterion of what hard-up growers are willing to sell for. Allied trades, like florists, are in much the same position; their commodities are more quickly perishable, however, and must be moved promptly compared to ours. There seems no great likelihood of members of the trade agreeing on a policy which will end the existing cutthroat competition, which is as discreditable as it is needless.

HARDY ROSES.

There was a really extraordinary demand for hardy roses of all kinds last spring. We can hardly look for a repetition of this in 1935. In spite of last winter's heavy toll on both climbers and bush roses, the interest in the queen of flowers remains undimmed. Not only did many new amateurs start rose culture last spring, but the sales during the past few weeks have been most encouraging. Formerly it was difficult to get buyers to take any plants in the fall, but today an increasing number swear by fall planting. They are aware of the fact, too often overlooked, that the stock they are buying at this season is freshly dug from the field and is plump and green, unlike the plants which are usually offered after several months of storage. It is unfortunate for the rose industry that these winter storage methods have to be resorted to, but our climatic conditions make them necessary and, of course, the storage plan, with its many drawbacks, does assist in lengthening the planting season. The large rose growers really try to carry their plants through the winter and turn them over to the retailers in as plump a con-

dition as possible. Most of them offer dormant roses only for late December and early January delivery, which is, of course, useless for those needing stock for fall plantings. If the dealers in hardy roses could be guaranteed reasonably early deliveries, say by November 1, it would pay them much better to secure and bury their plants outdoors, rather than to buy the plants shipped out in spring when the hectic rush season gets under way. Even when roses are carried through the winter in good condition, they are sometimes packed with so little hay or dry excelsior, in lieu of damp moss, about their roots that many are nearly ruined before they reach the retailer, for which there is no excuse.

WINTER PROTECTION FOR ROSES.

Most of us know that proper winter protection is a vital necessity for a great proportion of our outdoor roses. After the severe losses of the winter of 1933-34, amateurs are more likely than ever to give thought to winter covering. Of course, I am referring now to the best ways to winter roses in the average garden. Persons with plenty of money—and they are decreasing in numbers—can lay down plants, haul in soil and entirely bury them, supplementing this with a further covering of straw, salt hay or evergreen boughs to hold the frost in. In small rose gardens it is easily possible to tie the shoots together, wrap them in burlap, hill up with soil, later spread cow manure in the depressions and over this put a mulch of hay, leaves or straw and over these, again, evergreen boughs. The latter assist greatly in keeping the frost in and the mice out. Excluding light from roses is of great value, as, indeed, it is with certain evergreens. A diffused light assists in wintering plants which would otherwise die back badly. Climbing roses with only this season's growth might well be cut loose, laid down and covered with soil and later some boughs.

There are some who, in our New England climate, still think they can successfully winter standard roses, often called "tree" roses, by wrapping the heads in burlap containing some excelsior or hay; it is rare that plants thus protected survive. Far better dig up all standards and lay them in a trench on a slightly sloping piece of ground and cover well with soil, which can be supplemented with a mulch when the ground is well sealed by frost. It is unwise to uncover these too early; the spring, when the sun is bright, winds are harsh and nights are not infrequently frosty, takes a heavy toll on standards where they are not occasionally sprayed and some damp moss tied about the budded portions until the growths are well started.

THE END OF THE SEASON.

November virtually sees the end of the planting season. Of course, there will be sales of certain evergreens suitable for the filling of boxes and other uses incidental to the holiday season. Buying of hardy shrubs and perennials

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has persisted well this fall, favored by ideal soil and temperature conditions. Those who had the forethought to plant this fall will have a decided advantage over those who put everything off until spring. November has been proved to be a fine month for planting azaleas, and it has been noted that more amateurs than usual have bought these during the present autumn. The same holds true of rhododendrons, kalmias and pieris. One of the real wonders of the season has been the tremendously increased interest and sales of hardy bulbs, with tulips and narcissi the leaders, but with increased sales all along the line among the lesser bulbs, like crocus, scilla, chionodoxa, muscari, fri-

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tillaria, eranthia, galanthus and iris. From a position of relative unimportance the bulbous iris has risen to an important one in many gardens; its absolute hardiness in any well drained soil, the lovely colors and great value for cutting are strong points in its favor, as is also the fact that in the bulbous iris are purer blues, whites and yellows than are to be found in the germanica, Kämpferi or sibirica sections. Last, but not least, the lily steadily advances in favor, with candidum, regale, Henryi, speciosums, auratum, Hansonii, testaceum, umbellatum, Batemannii, croceum and Martagons strongly in favor. Fall plantings of all these are vastly better than those put off until spring. *Lilium philippinense formosanum* is rapidly becoming a leader in the lily field; any variety which can easily be flowered the same year the seeds are sown is something to write home about.

CATALOGUES RECEIVED.

[In writing for a copy of any of the catalogues reviewed below, please mention that you saw it described in this column of The American Nurseryman.]

Theodore Payne, Los Angeles, Cal.—An interesting catalogue of California wild flowers, representing the results of about twenty-nine years' endeavor to bring this class of materials before the public, according to a note. The flowers are from all parts of the state and from all types of locations. Descriptive material, illustrations and cultural notes are all good features of the booklet. A leaflet inserted lists thirty hybrid watonias, produced by Mrs. J. H. Bullard.

Harold's Pansy Gardens & Greenhouses, Grants Pass, Ore.—Seed and plant list for the current season. Pansies are featured in large selection, also delphiniums, both seeds and seedlings, in named varieties; snapiragons, larkspur, petunias, stocks and sweet peas.

Jan Bohm, Blatna, Czechoslovakia—Descriptive circular of a number of new rose introductions by this hybridizer, accompanied by four color plates.

Cottage Gardens, Lansing, Mich.—Fall offers of peonies, Holland bulbs, hybrid lilacs, tree peonies and other fine material for fall planting, illustrated with duotone half tones.

Rosemont Nurseries, Tyler, Tex.—An effective presentation of the roses offered by this firm in selected lists of new, scarce and standard varieties. Color plates and half tones are both used.

G. Ghose & Co., Darjeeling, India—A descriptive list of orchids, lilies and seeds of hardy Himalayan plants. Outline drawings suggest the form of a number of the orchid types.

D. H. Snowberger, Payette, Ida.—Price list of native plants and seeds, perennial and rocky plants and spring and fall bulbs. Among offers of sunny rare items are unusual selections in pentstemons, alysums, sedums, campanulas and veronicas. There are a score of shrub specialties, with *Vitex Negundo* promised for the fall of 1935.

Baker Bros. Nursery, Fort Worth, Tex.—Wholesale price list of nursery stock, both evergreen and deciduous items, and lining-out material. It is said that the cold of last winter and the drought of the past summer gave the plants at the nursery the severest test in the firm's fifty years of existence. The stock now offered represents the strongest varieties, and its fine growth is indicated in the numerous photographs reproduced in the catalogue, taken for the most part in October, 1934.

Grootendorst Nurseries, Benton Harbor, Mich.—Illustrated leaflet on espallier fruit trees, showing the different ways in which the specimens can be trained and describing their usefulness both for decoration and productivity.

Overlook Nurseries, Crichton, Ala.—Wholesale price list of nursery specialties, including both hardy and tender stock. Camellias and azaleas are leaders, with several new varieties in each group and complete cultural directions. Vines, palms, bulbs and succulent house plants are also listed. Two sagas are declared the outstanding recent introductions of the firm.

Cumberland Valley Nurseries, Inc., McMinnville, Tenn.—Wholesale listing of nursery stock, including fruit trees, evergreens, deciduous trees and shrubs, vines and bulbous plants. Lining-out stock and hardwood cuttings in a number of shrub varieties are part of the offer. Quotations can be given on collected stock, it is stated.

Good & Reese Co., Springfield, O.—Wholesale list of plants and bulbs. The offers are headed by a group of peonies, among which Mrs. Ward Welsh, a Japanese-type peony, is named as the firm's 1934 introduction. Other groups include bulbs, plants for miniature gardens and rockeries, plants for nursery and greenhouse planting, roses and perennials.

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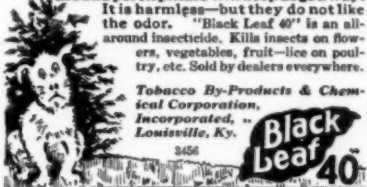
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Beech Bark Disease

Control of Insect-fungus Association on Beech Described in Canadian Journal

Another possible invading pest of trees, the beech bark disease, was recently the object of an extensive publication from Canada. The title of this paper is "The Beech Bark Disease," written by John Ehrlich and published as a special number of volume 10 of the Canadian Journal of Research in June, 1934. This publication may be secured for 35 cents by writing to the National Research Council of Canada, Ottawa. It is summarized in the "Nursery Disease Notes" of the New Jersey agricultural experiment station for October.

This disease is known only on the European beech, *Fagus sylvatica*, and the American beech, *F. grandiflora*. The disease is associated with the attacks of the beech scale, *Cryptococcus fagi*, which is considered the initial cause of the disease.

The first record of the disease on this continent was in Nova Scotia in 1920. By 1930 the disease was so firmly established there that few beech stands could be found in which some mortality had not already occurred. By 1932 it had reached New Brunswick, along the coast. Evidently, this disease was destined to spread by natural causes into the United States.

Search was made for both the insect and the fungus in New England. In 1929 the insect was found in Maine and eastern Massachusetts. In 1932 the fungus was found associated with the insect in Maine, but it has not yet been found in the Massachusetts insect-infested area.

Ehrlich reports forty-eight per cent of the beech dead in his observed areas in Nova Scotia and nineteen per cent in New Brunswick, indicating clearly the importance of this disease to beech stands.

Scale Precedes Fungus.

The presence of the insect on beech is readily observed, and since this scale always precedes attack of the tree by the fungus the danger signal is out well in advance of any serious trouble. During August and September, the presence of the insect pest is noted by countless numbers of minute yellow larvae crawling over the bark. By late autumn these crawlers settle down and secrete a wax over their bodies, enveloping them in a fluffy, white down. At this time of the year they are conspicuous, and on heavily infested trees the trunks and larger branches appear as if covered with snow.

With the advent of the fungus, which infects the bark through the feeding punctures of the insect, the bark is killed, and the insects, with their source of nourishment taken away, die. Death of the infected bark is followed by drying, so that infected areas on the trunk are depressed and cracked. Eventually, cankers are formed, typically assuming a more or less circular or oval shape, forming a deeply depressed cavity, surrounded and partially healed over with callous growth.

The destruction of the bark and other tissues of the tree leads to a progressive

dying of the top. Leaves late in the season usually curl and brown, the twigs die, no new buds are formed and the dead leaves hang on throughout the winter. In the spring, such branches fail to produce foliage, and other branches, lacking reserve food materials, produce small yellow foliage that often dies during the summer. Eventually, the entire tree is destroyed.

Control.

The control of this insect-fungus association on ornamental trees is discussed fully by Ehrlich. He suggests that prevention of artificial distribution into uninfested regions, through the agencies of nursery inspection and the prohibition of transportation of nursery stock and other materials likely to harbor the insect or the pathogen, would with a high degree of certainty prevent the disease from entering regions isolated by natural barriers. There are no specific regulations at present relative to either the insect pest or disease here involved.

Protection of beech trees can readily be accomplished by the eradication of the scale. Even where trees are disinfected within a year of scale attack, fungous infection rarely follows. It is even probable that following fungous infection the infected trees could be saved by proper application of surgical methods, since the cankers are local in character, followed by the eradication of the insect to prevent further infection.


Effective Oils.

For the eradication and control of the scale, Ehrlich tried various strengths of oil spray, kerosene-soap emulsion, nicotine sulphate and lime-sulphur, with the results that only the two oils were found effective. They were used successfully on park trees for two consecutive years without injury. However, there are some instances where certain oils have produced injury to beech and the application of oils to such trees should be made with caution. The problem on ornamental beeches is not so serious as on forest stands, where proper repression of the advance insect cannot be obtained. The disease should not, in light of our present knowledge concerning it, seriously threaten any ornamental beech trees that are properly cared for or on which insects are detected soon after infestation has taken place or even in which infection with the fungus has taken place.

REPELS RODENTS.

As protection against depredations on trees and shrubs by rabbits and other rodents, a new sulphur emulsion repellent called Sulphonol, developed by the Castle Chemical Co., has proved valuable. Applied in the early fall, material will remain effective throughout the winter, it is claimed. Mixing the solution is readily accomplished, as only water needs to be added, and applications are easily made with a brush. Protection against borers and sun scald is also said to be given by the product.

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Maple, in assortment for Parks, Cemeteries, Subdivisions and Landscape Work. Birch in variety, Hawthorn and other Ornamental and Shade Trees.

FRUIT TREE SEEDLINGS

Ample and Complete Stocks.

Car lot shipments at reasonable freight rates.

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Buxus suffruticosa and *B. sempervirens*. Selected uniform plants; bushy and foliated to center; masses of fibrous roots. Finished specimens from 4 inches up, ready for quick shipment. Prices lower, plants larger. Ask for special list. **CANTERBURY NURSERIES, Inc., Box A, Easton, Md.**

Always Consult
The Nurserymen's Credit Guide
Before you ship.

NATIONAL NURSERYMEN'S CREDIT BUREAU, Inc.
 612 N. Michigan Ave., Chicago

R. F. C. LOANS AVAILABLE.

(Continued from page 9.)

rowers who are already borrowing up to their legal limit.

"The depression years have left many enterprises in very much involved and weakened positions, but our experience has led us to believe that where present creditors are willing to cooperate by a proper adjustment of existing debt structure, many such enterprises may be safely supplied with additional funds that will enable continuing operations on a sound basis.

"Accordingly, we suggest to industrial concerns, to which credit at prevailing bank rates for loans of such character is not available but which can offer adequate security (even though such security may be frozen and therefore not generally acceptable to banks) and which can profitably use additional funds for labor and materials, that they communicate with the local loan agency of this corporation serving the territory in which such concerns are located.

"Each loan agency of the corporation will, when requested, assist and advise with applicants in determining their eligibility and in the preparation of applications."

AXEL PALM, for many years connected with the landscape department of F. R. Pierson, Tarrytown, N. Y., has formed a new concern to be known as the Yorktown Nursery Co., at Yorktown Heights, N. Y., to operate a part of the Pierson nursery establishment.

LIFE insurance statistics are being used by many observers as the most important indicators of general conditions. One of the surest evidences of a return to normal conditions is the rapid reduction in the volume of lapses of life insurance policies previously written, where holders have become unable to continue premium payments. Lapses constitute one of the most discouraging elements in the insurance business, corresponding to the loss of old and established customers in trade.

CLASSIFIED ADVERTISING

NURSERY STOCK

Hardy Perennials and Rock Garden Plants of over 50 varieties, strong seedlings, also 3 of the world's finest pansy strains at very low price. Send for list.
J. C. Schmidt, Bristol, Pa.

Peach Seed, Tennessee Naturals: 1 to 10 bus., \$2.50 per bu.; 10 to 25 bus., \$2.25; 25 to 50 bus., \$2.12½; 50 bus. and up, \$2.00.
Tennessee Nursery Co., Cleveland, Tenn.

California Privet, Lombardy Poplars, Oriental Planes, Shrubbery, Evergreens, Perennials, etc., at special prices.
Westminster Nursery, Westminster, Md.

NURSERY ACCESSORIES

Nursery Tools, Leonard Full-strapped Spades, Kunde Knives and Shears, Budding and Grafting Supplies. Free 30-page wholesale catalogue illustrates 600 tools.
A. M. Leonard & Son, Piqua, Ohio.

WANTED

Wanted: To contact live-wire to sell 10,000 to 15,000 Buxus suffruticosa, 14 to 18 inches tall, this fall at bargain prices. Desire to thin out large boxwood nursery. Attractive proposition to responsible party.
John Griffin, Box 1494, High Point, N. C.

SPACING OF PLANTS.

Big Factor in Strawberry Yield.

Until strawberry growers know the proper spacing for their plants, they cannot always be sure whether or not a variety is adapted to their location. The right spacing of strawberry plants is one of the important factors in yield, size and quality of berries, in control of losses from decay, in resistance to drought and, finally, in bringing the grower a profit from his crop. Specialists of the United States Department of Agriculture have been giving this matter of spacing strawberry plants much attention the past season. Some of the findings were as follows:

At Willard, N. C., Blakemore strawberries with 30, 4 and 1.8 plants and two-thirds of a plant as an average per square foot yielded, respectively, 42, 119, 131 and 99 crates (32 quarts) of marketable berries per acre. Less than two plants to the square foot yielded more than three times as many berries as 30 plants to a square foot. Observations in fields of Dorsett, Fairfax and other varieties in other strawberry sections also indicated that the number of plants in any given area is the chief factor in quantity and quality of yield and greatest profits. Overcrowding is frequently the cause of failure of vigorous varieties, such as Blakemore, Dorsett, Narcissa and others. Underplanting the space is also frequently the cause of failure of such varieties as Chesapeake, Mastodon and Rockhill. Other factors are hours of daylight, temperature and length of winter.

Restricting Runners.

In varieties such as Blakemore and Dorsett, yields can be increased by restricting the number of runner plants. This conserves soil nutrients and moisture and tends toward more crowns, more fruit buds and more and better berries per plant.

Valuable new seedlings may be discarded and new varieties have been and are being rejected simply because the plants have been grown in too dense stands, states George M. Darrow, of the bureau of plant industry, who first saw the relation between optimum spacing and variety adaptation in strawberries. In testing seedlings or varieties, a stand of 1 to 4 plants per square foot by July seems near the optimum, he declares. All later runners should be removed at frequent intervals. Culture should be such as to maintain the highest vigor in the remaining plants.

IN REPLY to a request of the Southern California Association of Nurserymen urging elimination of state, county and municipal nurseries' competition with private enterprise, the park commission of Los Angeles, Cal., has denied the request on the ground that the city is not competing with private nurseries.

POSITION WANTED

Man with excellent education, thoroughly experienced in nursery sales and landscape work and an expert radio speaker, desires position with future. Address No. 4, American Nurseryman, 508 S. Dearborn St., Chicago.

COLD WAX TREATMENT for NURSERY STOCK

ECONOMICAL, safe. A Vegetable Wax Emulsion which does not crack or chip. Easily applied. Trees and Shrubs can be sprayed or dipped. Produces a clear, transparent film, showing no whiteness. Dries quickly.

Splendid for rose bushes

Can be diluted with water

Non-inflammable

Highly effective for the prevention of desiccation

Two to three times greater covering power than melted paraffin

Also successfully used on Bulbs, Tubers, Fruits and Vegetables

Write for particulars and prices, stating for what purpose the wax is to be used

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Made of galvanized steel, finished green baked enamel. Card fully protected yet always in full view.

In display grounds and in the field, from Transvaal, South Africa, to the Island of Guam, they enjoy a record of "PERFECT SATISFACTION" (not one complaint) to thousands of users. EXCEPTIONAL SERVICE, at very moderate cost.

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Inexpensive — durable.
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No. 35—Paper (Wired) Label, Wgt. 2 lbs., \$1.45 per M.
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Special prices on Printed Labels upon request.
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Protect evergreens, shrubs, flowers, lawns from injury by dogs and cats. MARVEL DUST SPRAY keeps these animals away—insures your plantings.

MARVEL DUST SPRAY comes ready to use. No mixing required. Harmless to animals and shrubs. Simply shake it on flower beds, around shrubs, trees, etc. Takes many rains to destroy its effectiveness.

DEALERS, ATTENTION!

EIGHT MILLION DOGS

ELEVEN MILLION CATS

Destroying Evergreens and Shrubs

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**Selling Marvel Dust Spray
Keeping Dogs and Cats Away**

Every dollar invested in our combination offer brings you \$3.00.

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We will send full size working samples that will prove in your own shipping room that SAXOLIN is superior to any other wrapper for retaining dirt and moisture around the roots and delivering a clean, attractive package.

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If you are using any special size material for wrapping tell us the size and we will send samples. Try SAXOLIN now and be ready for your next shipping season.

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The Modern Nursery

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Department of Horticulture, Ohio State University

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Photographs and drawings, many of well known commercial nurseries, illustrate the latest methods.

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